# **Crash Tests**

# **New Car Safety**

# **Smart City**

1999 on

**Dual front airbags** 

#### **Overall Evaluation**



Overall score 21.84	out of 37
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Variant: 2 door coupe Eng: 0.7 litre.

Kerb weight: 740 kg Category: SMALL CAR Vehicles built: 1999 Test by Euro NCAP

**Important note**: The *left-hand-drive* European model was tested by EuroNCAP. Australasian specifications may vary and therefore models sold in Australasia might provide different levels of protection to those described on this page.

## **Model History and Safety Features**

The tested model of MCC SMART was introduced in Australia during 2003. Smart is a brand of Daimler-Chrysler.

Dual front airbags and ABS brakes are standard equipment. Side airbags are optional.

The upper portion of the front seat belt passes through guides attached to the seat. This feature improves the fit of the seat belt. Pretensioners are fitted to the seat belts to reduce slack in the event of a crash.

#### **OVERALL EVALUATION: 3 Stars**

The Smart scored 7.1 out of 16 in the offset crash test. The passenger compartment held it shape well. Protection from serious leg injury was poor for the driver. Chest protection was marginal for the passenger.

The vehicle scored 14.75 out of 16 in the side impact crash test. There was a slight risk of serious abdomen injury for the driver.

## FRONTAL OFFSET CRASH TEST

Body region scores out of 4 points each: Head/neck 4pts, chest 1.187pts, upper legs 0pts, lower legs 1.91pts.

The passenger compartment held its shape well in the offset crash test. The brake pedal moved rearwards by 24mm. The steering wheel hub moved forwards 17mm and upwards 12mm. The front ("A") pillar moved 26mm rearwards. All doors remained closed during the crash. After the crash both doors could be opened with normal effort.

The airbag cushioned the head of the driver and contact was stable. Vehicle components were a potential source of injury for the driver's knees. The passenger's head was cushioned by the airbag..

#### SIDE IMPACT CRASH TEST

Body region scores out of 4 points each: Head 4pts, chest 4pts, abdomen 2.747pts, pelvis 4pts.

The vehicle was not eligible for a Pole Impact Test since it did not have head-protecting side airbags. This test can earn eligible vehicles an extra two points.



Offset crash test at 64km/h

### **INJURY MEASUREMENTS**

Refer to the informal sheet "How the tendone"				Side Impact Crash Test at 50km/h
		Driver	Passn	Driver
Head HIC		395.8	343.5	193.5
Acceleration (g for 3ms)		46	46.4	44.8
Neck - Shear (kN)		0.29	0.45	-
Tension (kN)		1.35	2.18	-
Extension (Nm)		22.51	21.06	-
Chest Accln (g for 3ms)		-	-	-
Compression (mm)		28.19	41.69	21.62
Viscous criterion (m/s)		0.19	0.24	0.1
Abdomen - Force (kN)		-	=	1.47
Pelvis - Force	(kN)	-	-	1.31
Upper legs Force	Left	3.58	0.1	
(kN)	Right	5.91	0.29	
Knee displ (mm)	Left	8.32	0.19	
	Right	11.59	0.42	
Lower legs Force	Left	2.65	1.12	
(kN)	Right	3.11	0.29	
Index (Upper/Low)	Left	0.57/0.2	0.34/0.09	
	Right	0.44/0.87	0.43/0.12	

#### **Bonus points (maximum 5)**

Pole Test: Not eligible Seat belt reminders: Not eligible

Modifiers for offset test scores

Head No deduction
Chest No deduction
Upper leg Variable & conc. loading
Lower leg No deduction
Foot score Score 4 points

**Pedestrian rating** - tested to previous protocol



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